

**A VIRTUAL SEGMENTATION SYSTEM AND
METHOD OF OPERATION THEREOF**

ABSTRACT OF THE DISCLOSURE

A virtual segmentation system for use with a routing switch processor and a method of operating the same. In one embodiment, the virtual segmentation system includes a protocol data unit receiver subsystem configured to receive at least a portion of a protocol data unit and assemble the protocol data unit. The virtual segmentation system further includes a virtual segmentation subsystem that is associated with the protocol data unit receiver subsystem and is configured to perform virtual segmentation on the protocol data unit.